WHAT IS CLAIMED IS:

1.   A method of performing a virtual surgery on a patient to predict the result of a plastic surgery that may be performed on a patient, comprising the steps of:

taking pictures of the patient's hard and soft tissue;

preparing preprocessing data necessary for a virtual surgery;

performing a virtual surgery by manipulating the patient's hard tissue making changes in the hard tissue; and

synthesizing the result of the virtual surgery by deriving changes in the patient's soft tissue according to the changes in the hard tissue.

2.   The method of claim 1, wherein the step of taking data comprises the step of :

taking an x-ray picture of the patient's hard tissue.

3.   The method of claim 1, wherein the step of taking data comprises the step of :

taking a photographic picture of the patient's hard tissue.

4.   The method of claim 1, wherein the step of preparing preprocessing data comprises the step of:

generating a personalized 3-D model of the patient.

5.   The method of claim 4, wherein the step of generating a personalized 3-D model comprises the steps of:

extracting an outline of the patient by overlaying the hard tissue picture and the

soft tissue picture; and

extracting feature points of the patient by overlapping the outline onto a standard model containing outlines and standard feature points of a representative person.

6.   The method of Claim 1, wherein the step of manipulation includes cutting the hard tissue.

7.   The method of Claim 1, wherein the step of manipulation includes displacing the hard tissue.

8.   The method of Claim 1, wherein the step of manipulation includes rotating the hard tissue.

9.   The method of Claim 1, further comprising the step of visualizing the result of the virtual surgery in 3-D.

10.   The method Claim 9, further comprising the step of generating 2-D pictures of the 3-D visualization result.

11.   A system for performing a virtual surgery on a patient to predict the result of a plastic surgery that may be performed on a patient, comprising:

an image acquisition system for taking pictures of the patient's hard and soft tissue;

an image processing system for preparing preprocessing data necessary for a virtual surgery;

an image manipulation system for performing a virtual surgery by manipulating the patient's hard tissue making changes in the hard tissue; and

an image display system for synthesizing the result of the virtual surgery by deriving changes in the patient's soft tissue according to the changes in hard tissue.

12.   The system of claim 11, wherein said image acquisition system includes an x-ray camera for taking an x-ray picture of the patient's hard tissue.

13.   The system of claim 11, wherein said image acquisition system includes a camera for taking a photographic picture of the patient's hard tissue.

14.   The system of claim 11, wherein said image processing system includes means for generating a personalized 3-D model of the patient.

15.   The system of claim 14, wherein said means for generating a personalized 3-D model includes:

means for extracting an outline of the patient by overlaying the hard tissue picture and the soft tissue picture; and

means for extracting feature points of the patient by overlapping the outline onto a standard model of outlines and feature points of a representative person.

16.   The system of claim 11, wherein said image display system further includes

means for presenting a 3-D visualization of the result of the virtual surgery.

17.   The system of claim 16, wherein the image display system further includes means for generating 2-D pictures of the 3-D visualization.

18.   A method of performing a virtual surgery on a patient to predict the result of a plastic surgery that may be performed by a doctor on a patient using the service of a virtual surgery center connected to the doctor through a network, comprising the steps of:

taking pictures of the patient's hard and soft tissue;

preparing, at the virtual surgery center, preprocessing data necessary for a virtual surgery;

performing a virtual surgery by manipulating the patient's hard tissue making changes in the hard tissue; and

synthesizing the result of the virtual surgery by deriving changes in the patient's soft tissue according to the changes in hard tissue.

19.   The method of claim 18, wherein the network is the Internet.

20.   The method of Claim 18, wherein the virtual surgery center has a virtual surgery consulting group for providing consulting service related to virtual surgery.

21.   The method of Claim 20, wherein said virtual surgery consulting group includes a plastic surgeon.

22.   The method of Claim 20, wherein said virtual surgery consulting group includes an orthodontic dentist.